AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original) A color conversion method of converting printing image data, which comprises process color image data defined by a coordinate value of a predetermined first color space, and spot color image data defined by a coordinate value of a characteristic direction, into image data defined by a coordinate value of a predetermined second color space, for a proofer for outputting a proof image in which an image obtained through printing of an image based on the printing image data in accordance with a predetermined printing condition is reproduced, said color conversion method comprising:

a printing condition conversion step associated with a printing condition, of converting the coordinate value of the first color space into coordinate values of a colorimetry color space which is device-nondependent;

a spot color reference step of converting a spot color name into the coordinate values of the colorimetry color space;

a proof condition conversion step associated with a proof condition, of converting the coordinate values of the colorimetry color space into coordinate values of the second color space; and

a composition step of synthesizing, on the colorimetry color space or the second color space, image data defined by coordinate values of the colorimetry color space or the second color

space, wherein the process color image data is converted, with image data defined by coordinate

values of the colorimetry color space or the second color space, wherein the spot color name is

converted,

wherein the printing image data, which comprises the process color image data defined

by the coordinate value of the first color space, and the spot color image data defined by the

coordinate value of the characteristic direction, is converted into the image data defined by the

coordinate value of the second color space, for the proofer.

2. (original): A color conversion method according to claim 1, wherein said composition

step is a step of synthesizing different types of image data on the second color space,

of the printing image data, the process color image data defined by the coordinate value

of the first color space is converted into image data defined by the coordinate values of the

colorimetry color space in said printing condition conversion step, and the image data defined by

the coordinate values of the colorimetry color space thus obtained through the conversion is

further converted into image data defined by the coordinate value of the second color space in

said proof condition conversion step,

the spot color name is converted into the coordinate values of the colorimetry color space

in said spot color reference step, and the coordinate values of the colorimetry color space thus

obtained through the conversion is converted into the coordinate value of the second color space

in said proof condition conversion step, and

in said composition step, the image data defined by the coordinate value of the second

color space, for the proofer, is synthesized in accordance with the image data defined by the

coordinate value of the second color space, after conversion by said proof condition conversion

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step, the coordinate value of the second color space corresponding to the spot color, after

conversion by said proof condition conversion step, and the spot color image data of the printing

image data.

3. (original): A color conversion method according to claim 1, wherein said composition

step is a step of synthesizing different types of image data on the colorimetry color space,

of the printing image data, the process color image data defined by the coordinate value

of the first color space is converted into image data defined by the coordinate values of the

colorimetry color space in said printing condition conversion step,

the spot color name is converted into the coordinate values of the colorimetry color space

in said spot color reference step,

in said composition step, the image data defined by the coordinate values of the

colorimetry color space, for the proofer, is synthesized in accordance with the image data defined

by the coordinate values of the colorimetry color space, after the conversion by said printing

condition conversion step, the coordinate values of the colorimetry color space corresponding to

the spot color, after the conversion by said spot color reference step, and the spot color image

data of the printing image data, and

the image data defined by the coordinate values of the colorimetry color space, for the

proofer, which is synthesized by said composition step, is converted by said proof condition

conversion step into the. image data defined by the coordinate value of the second color space,

for the proofer.

4. (original): A color conversion method according to claim 2, wherein prior to

conversion of the printing image data into the image data for the proofer, there is produced a

process color conversion step in which the coordinate value of the first color space is directly

converted into the coordinate value of the second color space in accordance with said printing

condition conversion step and said proof condition conversion step,

in conversion of the process color image data of the printing image data, there is applied

said process color conversion step instead of individual application of both said printing

condition conversion step and said proof condition conversion step, so that of the printing image

data, the process color image data defined by the coordinate value of the first color space is

converted into image data defined by the coordinate value of the second color space before

synthesized with the spot color image data.

5. (original): A color conversion apparatus for converting printing image data, which

comprises process color image data defined by a coordinate value of a predetermined first color

space, and spot color image data defined by a coordinate value of a characteristic direction, into

image data defined by a coordinate value of a predetermined second color space, for a proofer

for outputting a proof image in which an image obtained through printing of an image based on

the printing image data in accordance with a predetermined printing condition is reproduced, said

color conversion apparatus comprising:

a definition storage section for storing

a first coordinates conversion definition associated with a printing condition, defining an

association between the coordinate value of the first color space and the coordinate values of a

colorimetry color space which is device-nondependent,

a spot color and coordinates conversion definition defining an association between a spot

color name and the coordinate values of the colorimetry color space,

a second coordinates conversion definition defining an association between the coordinate values of the colorimetry color space and the coordinate value of the second color space, and

a coordinates composition definition defining an association among coordinate values of the colorimetry color space or the second color space, wherein the process color image data is converted, on the colorimetry color space or the second color space, coordinate values of the colorimetry color space or the second color space, wherein the spot color name is converted, and a set of coordinate values wherein said two types of coordinate values are synthesized; and

a color conversion section for converting the printing image data, which comprises the process color image data defined by the coordinate values of the first color space and the spot color image data defined by the coordinate values of the characteristic direction, into the image data defined by the coordinate value of the second color space, for the proofer, referring to said first coordinates conversion definition, said spot color and coordinates conversion definition, said second coordinates conversion definition, and said coordinates composition definition, which are stored in said definition storage section.

6. (original): A color conversion apparatus according to claim 5, wherein said coordinates composition definition, which is stored in said definition storage section, defines an association between said two types of coordinate values of the second color space and said set of coordinate values, and said color conversion section comprises:

first conversion means for converting the process first color space, of the printing image data, into image data defined by the coordinate values of the colorimetry color space, referring to said first coordinates conversion definition;

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second conversion means for converting the spot color name into the coordinate values of the colorimetry color space, referring to said spot color and coordinates conversion definition;

third conversion means for converting the image data defined by the coordinate values of the colorimetry color space, after conversion by said first conversion means, into image data defined by the coordinate value of the second color space, referring to said second coordinates conversion definition;

fourth conversion means for converting the coordinate values of the colorimetry color space, associated with the spot color, after conversion by said second conversion means, into the coordinate value of the color image data defined by the coordinate value of the second color space, referring to said second coordinates conversion definition;

first composition means for synthesizing the image data defined by the coordinate value of the second color space, for the proofer, in accordance with the image data defined by the coordinate value of the second color space, after conversion by said third conversion means, the coordinate value of the second color space corresponding to the spot color, after conversion by said fourth conversion means, and the spot color image data of the printing image data, referring to said coordinates composition definition.

7. (original): A color conversion apparatus according to claim 5, wherein said coordinates composition definition, which is stored in said definition storage section, defines an association between said two types of coordinate values of the colorimetry color space and said set of coordinate values, and said color conversion section comprises:

fifth conversion means for converting the process color image data defined by the coordinate value of the first color space, of the printing image data, into image data defined by

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the coordinate values of the colorimetry color space, referring to said first coordinates conversion

definition;

sixth conversion means for converting the spot color name into the coordinate values of

the colorimetry color space, referring to said spot color and coordinates conversion definition;

second composition means for synthesizing the image data defined by the coordinate

values of the colorimetry color space, for the proofer, in accordance with the image data defined

by the coordinate values of the colorimetry color space, after conversion by said fifth conversion

means, the coordinate values of the colorimetry color space corresponding to the spot color, after

conversion by said sixth conversion, and the spot color image data of the printing image data,

referring to said coordinates composition definition; and

seventh conversion means for converting the image data defined by the coordinate values

of the colorimetry color space, for the proofer, which is synthesized by said second composition

means, into the image data defined by the coordinate value of the second color space, for the

proofer, referring to said second coordinates conversion definition.

8. (original): A color conversion apparatus according to claim 5, wherein said

coordinates composition definition, which is stored in said definition storage section, defines an

association between said two types of coordinate values of the colorimetry color space and said

set of coordinate values, and said color conversion section comprises:

coordinates conversion definition construction means for constructing a third coordinates

conversion definition to directly associate the coordinate value the first color space with the

coordinate value of the second color space in accordance with said first coordinates conversion

definition and said second coordinates conversion definition;

eighth conversion means for converting the process color image data defined by the

coordinate value of the first color space, of the printing image data, into image data defined by

the coordinate values of the second color space, referring to said third coordinates conversion

definition;

ninth conversion means for converting the spot color name into the coordinate values of

the colorimetry color space, referring to said spot color and coordinates conversion definition;

tenth conversion means for converting the coordinate values of the colorimetry color

space corresponding to the spot color, after conversion by said ninth conversion means, into the

coordinate value of the second color space, referring to said second coordinates conversion

definition; and

third composition means for synthesizing the image data defined by the coordinate values

of the second color space, for the proofer, in accordance with the image data defined by the

coordinate values of the second color space, after conversion by said eighth conversion means,

the coordinate values of the second color space corresponding to the spot color, after conversion

by said ninth conversion, and the spot color image data of the printing image data, referring to

said coordinates composition definition.

9. (original): A color conversion definition storage medium storing a color conversion

definition for converting printing image data, which comprises process color image data defined

by a coordinate value of a predetermined first color space, and spot color image data defined by a

coordinate value of a characteristic direction, into image data defined by a coordinate value of a

predetermined second color space, for a proofer for outputting a proof image in which an image

obtained through-printing of an image based on the printing image data in accordance with a

predetermined printing condition is reproduced, said color conversion definition comprising:

a first coordinates conversion definition associated with a printing condition, defining an

association between the coordinate value of the first color space and the coordinate values of a

colorimetry color space which is device-nondependent;

a spot color and coordinates conversion definition defining an association between a spot

color name and the coordinate values of the colorimetry color space;

a second coordinates conversion definition defining an association between the

coordinate values of the colorimetry color space and the coordinate value of the second color

space, said second coordinates conversion definition being associated with a proof condition; and

a coordinates composition definition defining an association among coordinate values of

the colorimetry color image data is converted, on the colorimetry color space or the second color

space, coordinate values of the colorimetry color space or the second color space, wherein the

spot color name is converted,, and a set of coordinate values wherein said two types of

coordinate values are synthesized.

10. (new): A color conversion method according to claim 1, wherein the process color

image data and the spot color image data are separately converted prior to being synthesized.

11. (new): A color conversion method according to claim 1, wherein said first color

space comprises a CMYK color space, said colorimetry color space comprises a L*a*b* color

space, and said second color space comprises an RGB color space.

12. (new): A color conversion method according to claim 1, wherein the converting of

the spot color name into coordinate values of the colorimetry color space occur concurrently with

printing condition conversion into coordinate values of the colorimetry color space.